

## TERNARY PHOTOINITIATOR SYSTEM FOR CATIONICALLY POLYMERIZABLE RESINS

### Abstract of the Disclosure

5                    Photopolymerizable compositions comprise a cationically polymerizable  
resin and a photoinitiator system comprising: (i) an iodonium salt; (ii) a visible light  
sensitizer; and (iii) an electron donor compound having an oxidation potential less than  
that of 1,4-dimethoxybenzene when measured versus a saturated calomel electrode,  
wherein the photoinitiator system has a photoinduced potential of less than that of 3-  
10 dimethylaminobenzoic acid in a standard solution of  $2.9 \times 10^{-5}$  moles/g diphenyl iodonium  
hexafluoroantimonate and  $1.5 \times 10^{-5}$  moles/g camphorquinone in 2-butanone. The  
compositions polymerize on exposure to light in the visible spectrum and are useful in a  
variety of applications, including dental adhesives and dental composites.